

Agenda item: 1

Staff person handling: Jim Lynch, Director

Date/location: March 1, 2006 in Helena, MT

Item: **Approve minutes**

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### **Background**

Staff presents the following minutes for review and approval:

- a. November 1, 2005 – regular meeting
- b. November 14, 2005 – telephone meeting
- c. November 18, 2005 – TCP approval
- d. December 7, 2005 – regular meeting
- e. December 12, 2005 – telephone meeting
- f. January 25, 2006 – regular meeting
- g. February 6, 2006 – telephone meeting

### **Notes/discussion**

### **Commission action**

Agenda item: 2

Staff person handling: Loran Frazier, Chief Engineer

Date/location: March 1, 2006 in Helena, MT

Item: **Speed limit studies**

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### **Background**

Staff has conducted speed limit studies on the following routes:

- a. South Montana Street (U 1805) – Butte-Silver Bow
- b. MT 40 and US 2 – Whitefish to Columbia Falls (Flathead County)
- c. US 87 – Lewistown East (Fergus County)
- d. MT 16 – Savage (Richland County)
- e. Secondary 222 and X-01312 – Dillon (Beaverhead County)

### **Summary**

The appropriate local government supports the special speed zone recommendations (see attached correspondence behind each speed limit report.)

### **Staff recommendations**

Staff recommends the commission approve the special speed zones as presented.

### **Notes/discussion**

### **Commission action**



Montana Department of Transportation  
PO Box 201001  
Helena, MT 59620-1001

## Memorandum

To: Loran Frazier, P.E. – Chief Engineer  
Highways and Engineering Division

From: Duane E. Williams, P.E.  
Traffic and Safety Engineer

Date: February 6, 2006

Subject: **South Montana Street – Butte-Silver Bow**  
Interim Speed Limit Recommendation For Commission Action

With the realignment of U-1805 the portion of South Montana Street from the intersection with Rowe Road and continuing south to the intersection with Hansen Road is now part of Butte-Silver Bow's federal-aid urban route system.

Since the 35 mph speed limit on Hansen Road (U-1820) was installed we have received inquiries from Butte-Silver Bow officials regarding the posted 25 mph speed limit on South Montana Street, an extension of Hansen Road. For continuity purposes they would like to have the posted speed limit increased to 35 mph until an engineering investigation can be conducted. Since this segment is new to the urban route system there are no approved special speed limits on record for the study area. Without prior approval of the Montana Transportation Commission our only speed limit option is to post the appropriate statutory speed limit based on the adjacent environment in which the roadway is located, either a 25 mph speed limit within an urban district or 70 mph speed limit outside an urban district.

The Butte District office conducted a windshield survey with Butte-Silver Bow officials on January 26, 2006. From that survey both parties arrived at the consensus that neither the statutory 25 mph speed limit or the statutory 70 mph speed limit is appropriate for traffic operation, and that the entire segment did not meet the definition to qualify as an urban district. Therefore, South Montana Street would qualify for an interim speed limit. The Butte District office with the support of Butte-Silver Bow has submitted a recommendation for an interim speed limit of 35 mph. We concur with their recommendation. District recommendation is attached.

## **Recommendation**

**A 35 mph interim speed limit beginning at the intersection with Rowe Road and continuing south to the intersection with Hansen Road, an approximate distance of 3,000 feet.**

DEW:DRB:TRF:u1805interim

attachments

copies: D.E. Williams  
D.R. Bailey



**Montana Department of Transportation**  
**PO Box 201001**  
**Helena, MT 59620-1001**

**Memorandum**

To: Loran Frazier, P.E. – Chief Engineer  
Highways and Engineering Division

From: Duane E. Williams, P.E.  
Traffic and Safety Engineer

Date: February 6, 2006

Subject: MT 40 & US 2 - Whitefish to Columbia Falls  
Speed Limit Recommendation For Commission Action

- ❑ In addition to a new hospital / medical center Flathead County officials expect further development of and other changes to the existing land use along MT 40. As part of their response they requested a speed limit investigation for the purpose of reducing the 70 mph speed limit on MT 40. The Missoula District office suggested that the study area should be expanded to include the US 2 portion of the corridor and tie in with the special speed limit configuration approaching Columbia Falls.
- ❑ MT 40 begins at a signalized intersection with US 93 south of Whitefish and continues east 4.5 miles where it ends at a signalized intersection with US 2. The MT 40 portion of the study area is 2-lane roadway consisting of two 12-foot travel lanes with 8-foot shoulders in each direction. There are left-turn bays at the intersections with Whitefish Stage Road and Conn Road. On US 2 the typical section widens, consisting of two 12-foot travel lanes with 10-foot shoulders in each direction separated by a two-way-left-turn lane. The roadside culture along both MT 40 and US 2 varies from rural to semi commercially developed at the “Blue Moon” intersection.
- ❑ Over the last three years there were 55 accidents reported along the 4.5-mile segment of MT 40 from the intersection with US 93 to the intersection with US 2 (Blue Moon). The accident rate is 1.29 accidents per million vehicle miles traveled. On the US 2 portion there were 14 accidents reported during the same 3-year period. The accident rate is 0.88 accidents per million vehicle miles traveled. Both MT 40 and this portion of US 2 are functioning with an accident rate close to or below the statewide average for rural NHS primary routes.
- ❑ The results of the engineering and traffic investigation support having a 65 mph – 60 mph configuration for the rural portions of this corridor with consideration of reducing the speed limit approaching the signalized “T” intersection with US 93, as the 85<sup>th</sup> percentile speeds throughout the entire study area are below the 70 mph speed limit. In evaluating the results of this investigation with the desires of Flathead County, the District Office’s suggestion for a uniform speed limit along the corridor, we believe it is both logical and a reasonable option to propose a 60 mph speed limit for the overall corridor.

- ❑ A 60 mph speed limit recommendation was presented to Flathead County officials for review and comment. Attached is letter received from Flathead County Commissioners concurring with the following proposed 60 mph speed limit. As part of their comments County officials have also requested a 60 mph speed limit on the east end of Columbia Falls to the intersection with Secondary 206. We will study this area, gather comments and report our findings this spring.
- ❑ **MT 40**  
**A 60 mph speed limit station 0+00, project F 100(11) (intersection with US 93) and continuing east to station 231+00 (intersection with US 2), an approximate distance of 4.5 miles.**

The above recommendation encompasses the MT 40 portion of the study area, a portion of which already has an approved speed limit of 60 mph.

#### **US 2**

**A 60 mph speed limit beginning at station 231+00, project F 38-1(5) (intersection with MT 40) and continuing to station 279+00, an approximate distance of 4,800 feet.**

This recommendation for US 2 also encompasses a segment that already has a 60 mph speed limit in place.

### **Report Submitted to Flathead County**

Flathead County Commissioners requested a speed limit investigation on MT 40 beginning at the intersection with US 93 and continuing east to the intersection with Whitefish Stage Road (Secondary 292), an approximate distance of 1.1-miles. County officials have approved amendments to existing zoning documents and expect further development of and other changes to the existing land use along MT 40. This additional development will include a new hospital / medical center, scheduled for completion in April 2006. Within their written request and also during an informational meeting Flathead County Commissioners specified their desire for a 45 mph speed limit beginning at the intersection with US 93 and continuing east to the intersection with Whitefish Stage Road. This segment of the MT 40 currently is posted with the statutory 70 mph speed limit. In conjunction with Flathead County's request the Missoula District office suggested that the study area should be expanded to include the remainder of the corridor and tie in with the special speed limit configuration approaching Columbia Falls. The purpose of the District's request is to maintain a uniform speed limit configuration along the east-west corridor between Whitefish and Columbia Falls.

MT 40 begins at a signalized intersection with US 93 south of Whitefish and continues east 4.5 miles where it ends at an intersection with US 2. US 2 intersects MT 40 from the south and then turns east towards Columbia Falls. This intersection of MT 40 and US 2 also known as "Blue Moon" is signalized. Currently there is a 3,500 foot 60 mph speed zone limit in place for the concentration of development and the change in operation associated with the intersection. The speed limit along the remainder of the study area to the west is statutorily 70 mph. East of "Blue Moon" intersection the speed limit also changes back to 70 mph for a short distance before dropping to 55 mph near the intersection with Larch Hill Drive near the community of Columbia Falls.

The MT 40 portion of the study area is 2-lane roadway consisting of two 12-foot travel lanes with 8-foot shoulders in each direction. There are left-turn bays at the intersections with Whitefish Stage Road and Conn Road. There are 10 intersections with public roads and numerous private approaches intersecting MT 40 within this 4.5-mile segment. On US 2 the typical section widens, consisting of two 12-foot travel lanes with 10-foot shoulders in each direction separated by a two-way-left-turn lane. Within the 55 mph speed zone approaching the intersection with Hill Top Road it transitions again to include curb & gutter with a sidewalk along the south side.

The roadside culture along both MT 40 and US 2 varies from rural to semi commercially developed at the “Blue Moon” intersection. There are nearby residences scattered throughout the study area. Average annual daily traffic volumes range from 9260 on the west end of the study area between the intersection with US 93 to the intersection with Whitefish Stage Road and 8550 from the intersection with Whitefish Stage Road to the “Blue Moon” intersection. On the US 2 portion (4-lane) of the study area the average annual daily traffic volume increases to 16,640.

## Accident History

### MT 40

The accident history was reviewed for a three-year period from June 1, 2002 to May 31, 2005. During this period there were 55 accidents reported along the 4.5-mile segment of MT 40 from the intersection with US 93 to the intersection with US 2 (Blue Moon). The accident rate is 1.29 accidents per million vehicle miles traveled. The statewide average for rural NHS primary routes is 1.24 accidents per million vehicle miles traveled. The following table lists the accident types by location.

	Angle	Rearend	Single Vehicle	Other
Intersection	3	9	1	2
Non-Intersection	2	8	25	5

Of the 26 single vehicle accidents 16 of those involved conflicts with animals, the vast majority of which occurred in the vicinity of the Whitefish River. There were six accidents at the intersection with Conn Road. The remainder of the accident experience was distributed throughout the corridor. Adverse roadway conditions were listed as a contributing factor in 22 percent of the accidents. Sixty-eight percent of the accidents occurred during daytime hours. There are no definable trends that pin-point a correctable condition.

### US 2

On the US 2 portion there were 14 accidents reported during the same 3-year period. The accident rate is 0.88 accidents per million vehicle miles traveled. This also is below the statewide average.

	Angle	Rearend	Single Vehicle	Other
Intersection	2	1	1	
Non-Intersection		2	5	3

There were two accidents reported at the signalized intersection with MT 40 and seven accidents within the 60 mph speed zone just east of this intersection. The remaining five accidents occurred within the 70 mph speed zone. They consisted of two single vehicle accidents, two rearend accidents and one head-on accident. There was no direct correlation between these five accidents.

### ***Travel speeds***

Vehicular travel speeds were sampled at 11 locations beginning near the intersection with US 93 and continuing east to the 55 mph speed zone near the intersection with Hill Top Road.

<b>Location on MT 40</b>	<b>85<sup>th</sup> Percentile Speed</b>	<b>Pace and Percentage</b>
MP 0.2 1,000' east of US 93	62 mph Eastbound 60 mph Westbound	(49 mph – 59 mph) 53% (49 mph – 59 mph) 57%
MP 0.4 2,100 east of US 93	62 mph Eastbound 67 mph Westbound	(49 mph – 59 mph) 56% (55 mph – 65 mph) 53%
MP 0.8 - 300' east of River Lakes Parkway Road	66 mph Eastbound 65 mph Westbound	(55 mph – 65 mph) 52% (55 mph – 65 mph) 46%
MP 1.1 – 300' east of Whitefish Stage Road	66 mph Eastbound 65 mph Westbound	(55 mph – 65 mph) 56% (55 mph – 65 mph) 56%
MP 1.4 – at the intersection With River Bluff Road	69 mph Eastbound 68 mph Westbound	(58 mph – 68 mph) 61% (55 mph – 65 mph) 57%
MP 2.1 – between Sandy Hill Ln. & Haps Ln.	67 mph Eastbound 67 mph Eastbound	(55 mph – 65 mph) 58% (55 mph – 65 mph) 56%
MP 2.6 – 800' east of Conn Road	65 mph Eastbound 67 mph Westbound	(55 mph – 65 mph) 58% (55 mph – 65 mph) 54%
MP 3.2 – between Reed Ln. & Trumble Cr. Road	67 mph Eastbound 68 mph Westbound	(55 mph – 65 mph) 58% (55 mph – 65 mph) 47%
MP 4.2 – 1,000' west of the intersection w/ US 2	58 mph Eastbound 61 mph Westbound	(46 mph – 56 mph) 59% (46 mph – 56 mph) 43%

<b>Location on US 2</b>	<b>85<sup>th</sup> Percentile Speed</b>	<b>Pace and Percentage</b>
MP 134.3 – 2,500' east of intersection w/ MT 40	64 mph Eastbound 68 mph Westbound	(52 mph – 62 mph) 54% (55 mph – 65 mph) 49%
MP 134.9 – Intersection With Hill Top Road	58 mph Eastbound 61 mph Westbound	(46 mph – 56 mph) 57% (49 mph – 59 mph) 54%

### ***Conclusions and Recommendations***

The results of this investigation support Flathead County's request for a reduction in the statutory 70 mph speed limit on MT 40. However, not down to the 45 mph level as desired. We recognize that changes in the adjacent land use may have an influence on traffic operation and the speed limit may need to be investigated again once conditions change. There is no mechanism within the engineering portion of the speed zoning process in which to arrive at speed limit recommendation to address the potential for future growth and development. The accepted practice is to use actual roadway and traffic characteristics and their relationship to the environment to select a speed limit.

With the exception of the segments near the major (signalized) intersections the 85<sup>th</sup> percentile speeds and the upper limit of the pace are typically 5 mph below the 70 mph speed limit. There is some variation in the speed profile within corridor associated with the level and proximity of development in the area. Traffic data does support that it would be logical to replace the relatively short (3,100 foot) 70 mph zone located between the “Blue Moon” intersection and the special speed limit configuration established specifically for Columbia Falls with a continuous 60 mph speed limit. In other words extend the existing 60 mph speed limit east to Columbia Falls.

Along the remainder of the study area with the exception of the segment immediately east of US 93 the speed statistics support a 65 mph speed limit as being optimum for traffic operation. The traffic data points towards having a 65 mph – 60 mph configuration for the rural portions of this corridor with consideration of reducing the speed limit approaching the signalized “T” intersection with US 93. As mentioned earlier the 85<sup>th</sup> percentile speeds throughout the entire study area are below the 70 mph speed limit. In evaluating the results of this investigation with the desires of Flathead County, the District Office’s suggestion for a uniform speed limit along the corridor, we believe it is both logical and a reasonable option to propose a 60 mph speed limit for the overall corridor. Within our office we discussed the option of proposing a short 50 mph speed limit in advance of the intersection with US 93, based on the projected speed profile and the knowledge that in the near future the hospital- medical center complex will generate additional access demands in the area. However, we found it difficult to convincingly recommend the need for a 50 mph step down, as there are specific traffic control warning devices in place for the stop condition at the intersection with US 93.

#### **MT 40**

**A 60 mph speed limit station 0+00, project F 100(11) (intersection with US 93) and continuing east to station 231+00 (intersection with US 2), an approximate distance of 4.5 miles.**

The above recommendation encompasses the MT 40 portion of the study area, a portion of which already has an approved speed limit of 60 mph.

#### **US 2**

**A 60 mph speed limit beginning at station 231+00, project F 38-1(5) (intersection with MT 40) and continuing to station 279+00, an approximate distance of 4,800 feet.**

This recommendation for US 2 also encompasses a segment that already has a 60 mph speed limit in place.

DEW:DRB:TRF:MT40\_rpt

attachments

copies: D.E. Williams  
D.R. Bailey



**Montana Department of Transportation**  
**PO Box 201001**  
**Helena, MT 59620-1001**

**Memorandum**

To: Loran Frazier, P.E. – Chief Engineer  
Highways and Engineering Division

From: Duane E. Williams, P.E.  
Traffic and Safety Engineer

Date: February 3, 2006

Subject: US 87 – Lewistown East  
Speed Limit Recommendations For Commission Action

- ❑ Recently, the Bureau of Land Management (BLM) constructed a new regional office on the outskirts of Lewistown in an area where the speed limit is statutorily 70 mph. This has increased both the volume of slower moving vehicles in the traffic mix and the number of turning movements on US 87. In response Lewistown City officials have requested a speed limit reduction.
- ❑ In the last three years there have been seven accidents reported on the east end of Lewistown. The accident rate is 2.03 accidents per million vehicle miles traveled. Two of those accidents occurred in the area of concern just outside the boundaries of the existing 45 mph speed zone.
- ❑ The results of our investigation support local desires for a reduction in the 70 mph speed limit along the segment passing by the new BLM complex. From the information gathered we recommended leaving the existing 35 mph and 45 mph speed limits in place and introduce a new 55 mph speed limit to extend configuration east to correspond with the changes in the adjacent side culture. The following 55 mph speed limit recommendation was presented to the City of Lewistown for review and comment. Attached is their letter indicating that they concur with the following recommendation.
- ❑ A 55 mph speed limit beginning at station 31+00, project FAP 229-D (1,700 feet east of the intersection with Marcella Avenue and continuing east to station 44+00, an approximate distance of 1,300 feet.

## Report Submitted to the City of Lewistown

In response to concerns about the speed limit configuration on US 87 - Lewistown East, city officials requested a speed limit investigation for the purpose of reducing and/or extending the existing special speed limit configuration further east. Recently, the Bureau of Land Management (BLM) constructed a new regional office on the outskirts of Lewistown in an area where the speed limit is statutorily 70 mph. This new addition with its employees and visitors has increased both the volume of slower moving vehicles in the traffic mix and the number of turning movements on US 87.

This segment of US 87 was constructed under project FAP 229 D in 1942 and improved in 1981. There have been more recent roadway improvements further into town. Within the 35 mph speed zone the typical section is made up of two 12-foot travel lanes separated by a two-way-left-turn lane. Parking practices are off-street. The roadway narrows to a 36-foot wide two-lane roadway within the 45 mph speed zone. There is a westbound left-turn bay for Pamida. The alignment is straight and flat. The average annual daily traffic volume is 1855. The adjacent side culture consists primarily of commercial development. At the intersection with Marcella Street the density of adjacent development drops off considerably with fewer businesses and larger gaps between businesses. With the addition of the new BLM complex along the north side of the roadway the boundaries of the community and the associated special operational characteristics have extended eastward.

### ***Accident History***

The accident experience was reviewed for a three-year period from June 1, 2002 to May 31, 2005. During this period there were seven accidents reported on the east end of Lewistown. The accident experience consisted of two angle type multiple vehicle accidents and five single vehicle accidents. The accident rate is 2.03 accidents per million vehicle miles traveled.

Three (angle & two single vehicle) of the accidents occurred within the existing 35 mph speed zone west of the intersection with Marcella Avenue. There was one angle accident and one single vehicle accident that occurred in the area of concern near milepost 83.5. The remaining two single vehicle accidents occurred out in the rural environment east of milepost 84.

### ***Travel Speeds***

Vehicular travel speeds were sampled at seven locations to develop a speed profile beginning near the intersection with Prospect Avenue and continuing to a point east of the access road to the BLM complex. The following table depicts the 85<sup>th</sup> percentile speeds and the pace of the traffic stream at each location sampled.

<b><u>Location</u></b>	<b><u>85<sup>th</sup> percentile Speed</u></b>	<b><u>Pace of Traffic Stream &amp; Percent</u></b>
Prospect Ave.	32 mph Westbound	(23 mph – 33 mph) 72%
25 mph to 35 mph	32 mph Eastbound	(23 mph – 33 mph) 74%
Milepost 83	33 mph Westbound	(23 mph – 33 mph) 74%
35 mph zone	35 mph Eastbound	(26 mph – 36 mph) 68%
Marcella Ave.	37 mph Westbound	(26 mph – 36 mph) 57%
Near 35 mph to 45 mph	38 mph Eastbound	(26 mph – 36 mph) 54%

Animal Hospital Appr. 45 mph zone	43 mph Westbound 44 mph Eastbound	(29 mph – 39 mph) 49% (32 mph – 42 mph) 48%
East of Pamida 45 mph zone	51 mph Westbound 54 mph Eastbound	(38 mph – 48 mph) 51% (41 mph – 51 mph) 47%
In Front of BLM 70 mph zone	57 mph Westbound 64 mph Eastbound	(46 mph – 56 mph) 51% (49 mph – 59 mph) 42%
1,100' East of BLM 70 mph zone	68 mph Westbound 65 mph Eastbound	(52 mph – 62 mph) 45% (52 mph – 62 mph) 43%

Based on their close proximity to the 85<sup>th</sup> percentile speeds and the upper limit of the pace within their respective boundaries the 35 mph and 45 mph speed zones are realistic for traffic operation. While in front of the BLM complex and to the west the normal flow of the traffic stream both entering and departing Lewistown is traveling at a rate well below the statutory 70 mph speed limit.

### ***Conclusions and Recommendations***

The information gathered in this study supports local desires for a reduction in the 70 mph speed limit in front of the BLM complex. There is good visibility on and along the roadway for successful operation at the existing travel speeds. Based on the inbound 85<sup>th</sup> percentile speed and the pace of the traffic stream as it passes by the complex in both directions we recommend introducing a new 55 mph speed limit on the east end of Lewistown.

A 55 mph speed limit beginning at station 31+00, project FAP 229-D (1,700 feet east of the intersection with Marcella Avenue and continuing east to station 44+00, an approximate distance of 1,300 feet.

DEW:DRB:TRF:p57lewiseast

attachments

copies:           D.E. Williams  
                      D.R. Bailey



**Montana Department of Transportation**  
**PO Box 201001**  
**Helena, MT 59620-1001**

**Memorandum**

To: Loran Frazier, P.E. – Chief Engineer  
Highways and Engineering Division

From: Duane E. Williams, P.E.  
Traffic and Safety Engineer

Date: February 3, 2006

Subject: MT 16 – Savage  
Speed Limit Recommendations For Commission Action

- ❑ A local delegation of concerned citizens and Richland County Commissioners feel that the existing travel speeds and the 70 mph speed limit are indicators that both motorists and the Department are failing to recognize the community of Savage. MT 16 passes along the west side of Savage. There is a dense line of trees that separate the edge of the roadway from the main body of the community. The community is much larger than it appears from the highway.
- ❑ This area was last studied in 1990 resulting in the addition of a two-way-left-turn lane to address an accident trend. In the last three years there have been three accidents reported. The accident rate is 1.92 accidents per million vehicle miles traveled. This is above the statewide average of 1.24 accidents per million vehicle miles traveled on rural NHS routes.
- ❑ It is our conclusion that motorists are at a disadvantage in not being able to visually take the presence of the community and the increased potential for conflict into account, and do not readily perceive the need to adjust their speed. Therefore, we concluded that the speed statistics were not a clear indicator of the true operational characteristics associated with a community. In an effort to promote additional uniformity in the travel speeds and motorist recognition of the community, we recommend the following 55 mph speed limit. Richland County Commissioners have reviewed the following proposal and concur. Their comments are attached.
- ❑ A 55 mph speed limit beginning at station 145+00, project EHS-F-RF 245(26) and continuing north to station 182+00, an approximate distance of 3,700 feet.
- ❑ As part of this speed limit recommendation we recommended that the sign panel size be increased to 36" x 48".

## Report Submitted to Richland County

In response to a delegation of concerned citizens Richland County Commissioners have requested a reduction in the statutory 70 mph speed limit for the community of Savage. Last winter Department staff met with County officials along with numerous residents and community leaders in Savage to discuss their concerns about the speed limit on the portion of MT 16 that passes along the west side of the community of Savage. During our meeting many of those in attendance voiced the opinion that having 70 mph travel speeds along the edge of their community is inappropriate and unsafe. They feel that the existing travel speeds and the 70 mph speed limit are indicators that both motorists and the Department are failing to recognize the community. Therefore, they believe they are being exposed to an unnecessary increase in risk of being involved in an avoidable accident. Other specific issues brought to our attention included:

- ❑ There is now a family with children that live on the west side of MT 16.
- ❑ Numerous coal and other trucks access MT 16 daily.
- ❑ Complaints of motorists using the two-way-left turn lane as a passing lane.
- ❑ The guardrail and roadway geometrics on the north end of the community restrict intersection sight distance at the intersection with County Road #107, particularly for elderly residents.
- ❑ There have been recent accidents at the intersection with County Road # 107.

MT 16 passes along the west side of Savage. This portion of the route was last reconstructed in 1975 under project EHS-F-RF 245(26) with a design speed of 70 mph. As shown in the following aerial photograph the majority of the community is located along a tangent segment. There is a dense line of trees that separate the edge of the roadway from the main body of the community. From our perspective the community was much larger than it appeared from the highway. There is a horizontal curve located at the north end of the community. This is also the area in which County Road #107 and two other local roads intersect MT 16.



Even though there is sight distance available due to the change in alignment and obstacles within the sight triangle motorists accessing MT 16 may feel uncomfortable doing so, as they are unable to make certain that there will be no oncoming traffic approaching once they begin their access maneuver.

### *Accident History*

The accident history was reviewed for a three-year period from June 1, 2002 to May 31, 2005. During this time frame there were three accidents reported within the community of Savage, two angle accidents and one single vehicle accident. The accident rate is 1.92 accidents per million vehicle miles traveled. This is above the statewide average of 1.24 accidents per million vehicle miles traveled on rural NHS routes.

Both of the angle accidents occurred at the intersection with County Road #107 and involved a vehicle attempting a left-turn onto MT 16 and failing to yield to a southbound motorist. One was a truck accident. There is no direct correlation between this accident and the additional sight distance needed to the south for trucks crossing the center lane.

### *Travel Speeds*

Vehicular travel speeds were sampled at five locations to develop a speed profile along the portion of MT 16 that passes by the community of Savage. The 85<sup>th</sup> percentile speeds and the pace of the traffic stream are depicted on both the attached straight-line drawing and the table below.

Location	85 <sup>th</sup> Percentile Speed	Pace and Percentage
1,000 Feet South of Town	69 mph Northbound 66 mph Southbound	58 mph – 68 mph (49%) 55 mph – 65 mph (44%)
Entering Savage Guide Sign (south end)	72 mph Northbound 72 mph Southbound	55 mph – 65 mph (40%) 64 mph – 74 mph (39%)
Near the Intersections with 5 <sup>th</sup> St. & Main St.	72 mph Northbound 70 mph Northbound	58 mph – 68 mph (34%) 61 mph – 71 mph (38%)
Between the Intersection with 4 <sup>th</sup> St. & County Rd. #107	71 mph Northbound 71 mph Northbound	58 mph – 68 mph (36%) 61 mph – 71 mph (37%)
North end of Community	78 mph Northbound 66 mph Southbound	70 mph – 80 mph (32%) 52 mph – 62 mph (44%)

The speed statistics do not necessarily reflect what we would normally expect in that both the 85<sup>th</sup> percentile speeds and the pace of the traffic stream are higher within the central portion of the study area as opposed to the northern and southern extremities. At first we questioned the integrity of the traffic data. However, after a more in depth review of the raw data we observed that the overall range in the travel speeds was at it greatest at station #4 near the intersection with 4<sup>th</sup> Street. For example in the northbound direction 30 percent of the total speed population was traveling at or below 35 mph, and the remainder of the population was traveling between 35 mph to in excess of 85 mph. Those speeds less than 35 mph were classified into the lowest bin of our traffic counter configuration and are not reflected in the above statistics. Including them within the sample would not have a significant impact on the 85<sup>th</sup> percentile speeds, but they would draw the pace down below the 85<sup>th</sup> percentile speed.

In analyzing the raw data sets individually and as a whole we believe that the traffic data collected is accurate. It simply shows that there is a definite lack of uniformity in the travel speeds within the central portion of the community. This is due to the natural mix of the free

flowing through movement traffic data versus those movements generated within the community traffic data.

### ***Conclusions and Recommendations***

Based on the size of the community and the number of access points leading into it, it is our conclusion that this segment of MT 16 distinguishes itself from the surrounding environment to the north and south. Motorists are at a disadvantage in not being able to visually take the presence of the community and the increased potential for conflict into account. Without visual confirmation of the nearby and adjacent development motorists do not perceive the need to adjust their speed.

In our opinion for the community of Savage the 85<sup>th</sup> percentile speeds and the upper limit of the pace are not a clear indicator of the true operational characteristics associated with the concentration of access points, a community of this size and its actual proximity to the roadway. They are a reflection of the rural appearance in having a continuous line of trees located between the edge of the roadway and the development. The results of a previous investigation identified an accident trend and demonstrated a need for the two-way-left-turn lane. This also lends support that this segment of roadway has special operational characteristics. Therefore, it is our conclusion that special operational characteristics exist and justify consideration of a special speed limit. In this particular case we are unable to fully rely on the speed statistics to arrive at a speed limit recommendation.

Based on that the community is primarily orientated along one side of the roadway and the available sight distance for trucks accessing MT 16 from county road #107, we recommend reinstating a 55 mph speed limit that was originally in effect when the two-way-left-turn lane was put into operation with the intent of promoting additional uniformity in the travel speeds and motorist recognition of the community.

A 55 mph speed limit beginning at station 145+00, project EHS-F-RF 245(26) and continuing north to station 182+00, an approximate distance of 3,700 feet.

As part of the speed limit recommendation we also recommend that the sign panel size be increased to 36" x 48".

DEW:DRB:TRF:savage

attachments

copies:           D.E. Williams  
                      D.R. Bailey



**Montana Department of Transportation**  
**PO Box 201001**  
**Helena, MT 59620-1001**

**Memorandum**

To: Loran Frazier, P.E. – Chief Engineer  
Highways and Engineering Division

From: Duane E. Williams, P.E.  
Traffic and Safety Engineer

Date: February 3, 2006

Subject: Secondary 222 and X-Route 01312  
Speed Limit Recommendations For Commission Action

- ❑ Beaverhead County Commissioners requested the Department to conduct a speed limit study on Old Highway 91 beginning at the intersection with Atlantic Street in Dillon and continuing south to the end of the pavement south of the Interstate 15 Barretts Interchange. The study area is made up of Secondary 222 and X-route 01312. There are no approved special speed limits on record for either route. However, there is a 45 mph – 35 mph – 25 mph special speed limit configuration posted for the transitional area approaching Dillon.
- ❑ The adjacent side culture consists of residential development and a hospital near Dillon transitioning to rural agricultural land as the route continues south. The typical section consists of two 12-foot travel lanes in each direction with little or no surfaced shoulder area. Traffic volumes ranged from 2630 in front of the hospital to a low of 200 at the south end of the study area.
- ❑ The accident history was reviewed for a three-year period. The accident rate per million vehicle miles traveled was 1.15 on Secondary 222 and 1.62 on X-route 01312. The statewide average for rural secondary routes is 1.68 accidents per million vehicle miles traveled. One of the accidents involving a motorcyclist on the X-route 01312 resulted in a fatality.
- ❑ Based on our investigation we submitted the following recommendations to establish an official special speed limit configuration for the transitional and semi-developed area south of Dillon and a 60 mph speed limit along the remaining rural portion of the route. Beaverhead County officials have concurred with the following recommendations. Their comments are attached.
- ❑ **Secondary 222**  
**A 35 mph speed limit beginning 500 feet south of the intersection with Atlantic Street (as currently posted) and continue south to station 14+50, project FAP 255(A) (the south side of the intersection with Blacktail Road), an approximate distance of 1,250 feet.**

**A 45 mph speed limit beginning at station 14+50, project FAP 255(A) and continuing**

**south to station 24+00, an approximate distance of 950 feet.**

**A 60 mph speed limit beginning at station 24+00, project FAP 255 (A) and continuing south to 103+00 (at the intersection with the Interstate 15 Jackson Interchange), an approximate distance of 3.1 miles.**

□ **X-Route –01312**

**A 60 mph speed limit beginning at station 103+00, project I 15-1(27), and continuing south to the end of the frontage road, an approximate distance of 5.4 miles.**

### Report Submitted to Beaverhead County

This investigation was conducted at the request of Beaverhead County Commissioners. County officials instructed us to begin the study at the intersection with Atlantic Street in Dillon and continue south along the Old Highway 91 alignment to the end of the pavement approximately 1.5 miles south of the Interstate 15 Barretts Interchange. The study area is made up of two routes, Secondary 222 and X-Route 01312. Both routes are state maintained. There are no approved special speed limits on record for either route. Beaverhead County did not specify a desired speed limit configuration or identify any traffic issues within their request.

Secondary 222 begins just inside Dillon's urban district boundary and continues south 3.6 miles to the Interstate 15 Jackson Interchange. In Dillon the adjacent side culture consists of residential area and a hospital. There is curb & gutter within this segment. From the end of the curb & gutter segment to the intersection with Blacktail Road the adjacent side culture transitions from urban to rural with fewer residences and longer distances between residences. There is an existing 45 mph – 35 mph – 25 mph special speed limit configuration posted for the transitional area approaching Dillon and the intersection with Atlantic Street. The remainder of the Secondary 222 is located in a rural environment with some individual residences that set back from the roadway. In addition to the intersection with Blacktail Road there are eight other intersections with public roads within this 3.6-mile segment.

Features on the X-Route 01312 portion of the study area include the livestock yards, an industrial plant and fishing accesses. Interstate 15 on the west side and a railroad along the east side of the route make up the vast majority of the adjacent land use along this frontage road. The typical section consists of two 12-foot travel lanes in each direction with little or no surfaced shoulder area.

Daily traffic volumes range between 2630 along the segment that passes by the hospital to 815 in the rural area north of the Interstate 15 Jackson Interchange. Blacktail Road generates a major portion of traffic volume on the north end. Daily traffic volumes on X-Route 01312 were 200 during this investigation.

### ***Accident History***

The accident history was reviewed for a three-year period from June 1, 2002 to May 31, 2005. There were 4 single vehicle accidents and one head-on accident reported on Secondary 222 portion of the study area. The accident rate is 1.15 accidents per million vehicle miles traveled. The statewide average for rural secondary highways is 1.68 accidents per million vehicle miles traveled. There are no definable trends that pinpoint a correctable condition. All five of the accidents occurred in the rural area within the posted 70 mph zone.

Along the x-route portion of the study area there were two accidents reported in the last 3 years. The first accident was angle in type associated with the intersection with Rebich Road. The second accident occurred at the end of Old Highway 91 and involved a motorcyclist that lost control within a curve. This accident resulted in a fatality. Based on the traffic volumes gathered in this investigation the accident rate along this portion of the study area is 1.62 accidents per million vehicle miles traveled.

### *Travel Speeds*

<b>Location</b>	<b>85<sup>th</sup> Percentile Speeds</b>	<b>Pace of Traffic Stream</b>
Int. w/ Barrett St. 35 mph zone	38 mph Northbound 38 mph Southbound	(29 mph – 39 mph) 57% (29 mph – 39 mph) 61%
Int. w/ Blacktail Rd. 35 mph to 45 mph transition	46 mph Northbound 45 mph Southbound	(35 mph – 45 mph) 33% (35 mph – 45 mph) 35%
Milepost 0.5 45 mph to 70 mph transition	60 mph Northbound 57 mph Southbound	(44 mph – 54 mph) 40% (44 mph – 54 mph) 47%
Milepost 0.7 Reduced Speed Ahead Sign	65 mph Northbound 61 mph Southbound	(52 mph – 62 mph) 39% (49 mph – 59 mph) 46%
Milepost 1.1 70 mph zone	67 mph Northbound 63 mph Southbound	(52 mph – 62 mph) 37% (49 mph – 59 mph) 46%
400' S. of Arabian Ln. 70 mph zone	67 mph Northbound 65 mph Southbound	(52 mph – 62 mph) 38% (52 mph – 62 mph) 46%
Petersen L. (MP 2.0) 70 mph zone	66 mph Northbound 65 mph Southbound	(52 mph – 62 mph) 41% (52 mph – 62 mph) 44%
Milepost 3.0 70 mph zone	64 mph Northbound 59 mph Southbound	(52 mph – 62 mph) 40% (43 mph – 53 mph) 45%
End of Secondary 222 Near Jackson Interchange	65 mph Northbound 57 mph Southbound	(49 mph – 59 mph) 44% (43 mph – 53 mph) 51%
Milepost 3.8 On X-Route 01312	62 mph Northbound 61 mph Southbound	(50 mph – 60 mph) 34% (47 mph – 57 mph) 38%
Milepost 4.0 On X-Route 01312	68 mph Northbound 64 mph Southbound	(58 mph – 68 mph) 39% (49 mph – 59 mph) 46%
Milepost 5.0 On X-route 01312	69 mph Northbound 67 mph Southbound	(55 mph – 65 mph) 41% (52 mph – 62 mph) 40%
<b>Location</b>	<b>85<sup>th</sup> Percentile Speeds</b>	<b>Pace of Traffic Stream</b>
Milepost 6.0 On X-route 01312	69 mph Northbound 67 mph Southbound	(49 mph – 59 mph) 27% (52 mph – 62 mph) 42%
Milepost 7.1 Near Barretts Interchange	60 mph Northbound 63 mph Southbound	(40 mph – 50 mph) 36% (46 mph – 56 mph) 34%
Milepost 8.0 On X-route 01312	68 mph Northbound 66 mph Southbound	(58 mph – 68 mph) 35% (55 mph – 65 mph) 33%
Milepost 8.6 Near the end of the Route	56 mph Northbound 61 mph Southbound	(46 mph - 56 mph) 44% (43 mph – 53 mph) 36%

The posted 45 mph – 35 mph – 25 mph speed limit configuration is appropriate to reflect the change in traffic operation associated with the rural to urban transition associated with the city of Dillon. Each of these speed limits is at or just below the 85<sup>th</sup> percentile speeds and the upper limit of the pace within their respective boundaries.

Along the remainder of the study area the travel speeds on Secondary 222 and X-Route 01312 were very similar with no definite distinctions from one route designation to another. The 85<sup>th</sup> percentile speeds and the upper limit of the pace were consistently below the statutory 70 mph speed limit at every location sampled. Overall, the upper limit of the pace was typically a few miles-per-hour below the 85<sup>th</sup> percentile speeds. At the vast majority of the locations sampled the 85<sup>th</sup> percentile speeds were around 65 mph, whereas the upper limit of the pace was closer to 60 mph. There were some variations both above and below this trend in the speed statistics. However, there is a greater tendency for the speed statistics to be at or below 60 mph. These variations in the travel speeds are associated with changes in the roadway's alignment and the close proximity of the speed sample to an interchange.

### ***Conclusions and Recommendations***

The information gathered in this investigation supports the need to formally establish a special speed limit configuration for the transitional semi-developed area south of Dillon. The speed statistics along remainder of Secondary 222 and all of X-Route 01312 support a reduction in the statutory 70 mph speed limit.

For the area immediately south of Dillon we recommend validating the posted 45 mph and 35 mph speed limits that are in operation. Within the Dillon urban district the speed limit is statutorily 25 mph, and is posted accordingly. The 25 mph speed limit does not require action by the Montana Transportation Commission, so therefore will not be included within our recommendation. For the rural environment south of the intersection with Blacktail Road and the existing 45 mph speed limit we recommend reducing the 70 mph speed limit to 60 mph to better reflect traffic operation within the corridor.

### **Secondary 222**

**A 35 mph speed limit beginning 500 feet south of the intersection with Atlantic Street (as currently posted) and continue south to station 14+50, project FAP 255(A) (the south side of the intersection with Blacktail Road), an approximate distance of 1,250 feet.**

**A 45 mph speed limit beginning at station 14+50, project FAP 255(A) and continuing south to station 24+00, an approximate distance of 950 feet.**

**A 60 mph speed limit beginning at station 24+00, project FAP 255 (A) and continuing south to 103+00 (at the intersection with the Interstate 15 Jackson Interchange), an approximate distance of 3.1 miles.**

### **X-Route -01312**

**A 60 mph speed limit beginning at station 103+00, project I 15-1(27), and continuing south to the end of the frontage road, an approximate distance of 5.4 miles.**

DEW:DRB:TRF:s222

attachments

copies:           D.E. Williams  
                      L. Alt w/ attachments  
                      D.R. Bailey

Agenda item: 3

Staff person handling: Sandra Straehl – Rail, Transit & Planning Administrator

Date/location: March 1, 2006 in Helena, Montana

Item: **Nine seal-and-cover/crack-seal projects in Great Falls**

*Great Falls Urban System Maintenance – UPN 6124*

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**Background**

MDT is requesting commission approval for the addition of a project into the program to perform seal-and-cover (SC) and crack-seal (CS) work at nine identified sites. The identified sites are located on urban routes in the City of Great Falls and will be funded through an annual \$75,000 set-aside of Surface Transportation Program Urban (STPU) funds.

In 2000, through an agreement with MDT, the Great Falls Policy Coordinating Committee initiated sub-allocating a portion of their Urban Program funds for identified maintenance activities on urban designated roadways in the Great Falls area. The suballocation account to-date has accumulated \$525,000, with \$85,550 expended for the Fox Farm Road project (UPN 4748), leaving a balance of \$439,500.

The following sites have been identified for the Urban System Maintenance Program, funded by the accumulated local set-aside.

<i>AREA</i>	<i>ROUTE</i>	<i>DESCRIPTION</i>	<i>BEG RP</i>	<i>END RP</i>	<i>SCOPE</i>	<i>EST COST</i>
1	U5217	25 <sup>TH</sup> St S- Central Ave to 10 <sup>th</sup> Ave S	0.8	1.6	SC/CS	\$32,699
2	U5219	38 <sup>th</sup> St N-7 <sup>th</sup> Ave N to NE Bypass	1.3	1.9	SC/CS	\$26,575
3	U5219	38 <sup>th</sup> St S-10 <sup>th</sup> Ave S to 4 <sup>th</sup> Ave N	0.0	1.1	SC/CS	\$47,293
4	U5225	14 <sup>th</sup> St SW-Acacia Way to 13 <sup>th</sup> Ave SW	0.7	1.8	SC/CS	\$63,914
5	U5226	26 <sup>th</sup> St S-City Limits to 10 <sup>th</sup> Ave S	0.4	1.0	SC/CS	\$52,494
6	U5226	26 <sup>th</sup> St S-10 <sup>th</sup> Ave S to Central Ave	1.0	1.8	SC/CS	\$34,188
7	U5234	1 <sup>st</sup> Ave S-Park Dr to 10 <sup>th</sup> St S	0.0	0.7	SC/CS	\$50,385
8	U5236	2 <sup>nd</sup> Ave S-7 <sup>th</sup> St S to Park Dr	0.7	1.1	SC/CS	\$36,954
9	U5238	9 <sup>th</sup> St NW-Central Ave W to NW Bypass				\$25,508
					<b>Subtotal</b>	\$370,010
		Engineering at 15%				\$ 55,501
					<b>Total</b>	\$425,511

The intent of the requested project is to protect and seal the roadways to preserve the function of the system and retard future deterioration. Due to the relative urgency of preventative maintenance projects, staff is requesting to proceed with PE for the project, estimating that construction will occur in 2007.

**Summary**

MDT proposes using URBAN (STPU) funds for seal-and-cover and crack-seal work on the identified Great Falls urban routes. The estimated total project costs are \$425,511, which consists of \$25,900 for preliminary engineering, \$29,600 for construction engineering and \$370,011 for construction. The estimated preliminary total project costs do not exceed the available funding of \$439,450 from this sub allocated account, and the overall Great Falls urban balance will remain in a positive position. The preliminary engineering is planned for in the 2005 Tentative Construction Program.

**NOTE:**

This project is expected to be ready for construction in 2007 and will have to be prioritized in the 2006 Tentative Construction Program. In the event the project is ready to proceed in 2006 to construction, a priority change may be investigated within the urban program.

**Staff recommendations**

Staff recommends the commission approve the above project to the program.

**Notes/discussion****Commission action**

Agenda item: 4

Staff person handling: Sandra Straehl – Rail, Transit & Planning Administrator

Date/location: March 1, 2006 in Helena, Montana

Item: **PE for culvert replacement project in District 4**

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### **Background**

MDT is requesting commission approval to perform preliminary engineering activities in the amount of \$250,000 to identify failing culverts located in the Glendive District. The Glendive District has soils that are corrosive and have accelerated the deterioration of culverts throughout the district. These pipes are on roadway segments not currently programmed for reconstruction or rehabilitation, and if not identified and planned for, could cause roadway failures.

The culverts are located on various systems, consequently potential funding sources are: National Highway (NH), Surface Transportation Program Secondary (STPS) and Surface Transportation Program - Primary (STP) funds.

Funding for preliminary engineering in the 2005 Tentative Construction Program for District 4 NHS will be used for this field review. As a result of the field review, staff will bring back future recommendations for system-specific project sites and exact funding sources.

### **Summary**

The purpose of the request is a preliminary engineering program to identify sites of potentially failing culverts in the Glendive District.

### **Staff recommendations**

Staff recommends the commission approve programming the above project for \$250,000 from District 4's NHS preliminary engineering allocation.

### **Notes/discussion**

### **Commission action**

Agenda item: 5

Staff person handling: Sandra Straehl – Rail, Transit & Planning Administrator

Date/location: March 1, 2006 in Helena, Montana

Item: **Enhancement Project on King Avenue (U1010) in Billings**  
*Bannister Drain Trail*

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**Background**

The Commission approves Community Transportation Enhancement Program (CTEP) projects that are located on or adjacent to state designated streets and highways. The following CTEP project is funded with the enhancement set-aside of the Surface Transportation Program, which is allocated by population to Montana's local and tribal governments. The communities select projects for funding with their allocation and provide the required non-federal match. The program is based on an agreement between MDT and Montana's local and tribal governments.

The project proposed for addition to the program is *Bannister Drain Trail* in Billings. This enhancement project will design and construct a 10 foot-wide hard surfaced pedestrian/bike path slightly over one-half mile in length. The work will include landscaping, signage and the reseeding of disturbed areas. This section of trail will be sited on existing public right-of-way as well as on private property. The preliminary planning and design engineering will involve determining easement and/or right-of-way needs.

The project begins at the intersection of King Avenue and the Billings Bend Water Association (BBWA) Canal. The project crosses King Avenue mid-block and continues southward along the east side of the canal for approximately one-quarter mile. The shared use path then turns eastward to connect with the Midland Trail for a total length of approximately one-half mile. The estimated total project costs are \$384,328, which consists of \$38,433 for preliminary engineering, \$46,119 for construction engineering and \$299,776 for construction.

Including this project, the city of Billings will have obligated \$5,181,472 of the \$5,768,459 made available through the CTEP program.

All work will be in accordance with current design standards and ADA requirements.

**Staff recommendations**

Staff recommends the commission approve the addition of this project to the program.

**Notes/discussion**

**Commission action**

Agenda item: 6

Staff person handling: Sandra Straehl – Rail, Transit & Planning Administrator

Date/location: March 1, 2006 in Helena, MT

Item: **Railroad Crossings – Circuitry Upgrade**

*Secondary 518 – East Helena*

*Greenough Drive – Missoula*

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**Background**

Through the Rail Highway Safety program the installation of new signals and circuitry upgrade candidate projects are identified for funding. Prioritization is determined through a cooperative effort of the department and Montana's railroads. New signal projects are identified through MDT's priority index, which is based on vehicle and train exposure, and geometric characteristics of the crossing. Circuitry upgrades are prioritized based on the priority index and input provided by the specific railroad.

Two sites consisting of circuitry upgrades have been prioritized for improvement through this process. The improvements will be funded with Surface Transportation Program Railroad Protective funds (STPRP under TEA-21) or the Rail-Highway Crossings Program (under SAFETEA-LU). The funds are used to pay for materials and labor. The appropriate railroad performs the installation. The location, railroad authority, proposed scope of improvement, and costs are as follows:

<u>Dist</u>	<u>RR</u>	<u>Route</u>	<u>Location</u>	<u>Scope</u>	<u>Cost</u>
3	MRL	S-518N	FAS 518-East Helena	Circuitry	\$102,000
1	MRL	M-81-256N	Greenough Dr-Missoula	Circuitry	\$102,000
				Total	\$204,000

**Summary**

Through a cooperative effort between BNSF, MRL, and MDT the projects listed above are proposed for improvement under the STPRP or Rail-Highway Crossings Program. MDT will pay for materials and labor totaling \$204,000 and the railroad will be responsible for construction. These projects will be amended into the current STIP if approved by the Commission. Note that the obligation authority necessary for these projects is identified as a "plug" amount in the November 2005 Tentative Construction Program.

**Staff recommendations**

Staff recommends the Commission approve the addition of these projects to the program.

**Notes/discussion**

**Commission action**

Agenda item: 7

Staff person handling: Loran Frazier, Chief Engineer

Date/location: March 1, 2006 in Helena, MT

Item: **Name request for new bridge in Hamilton on US 93**

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### **Background**

Representatives Gary MacLaren and Bob Lake request the new bridge on US 93 in Hamilton – where the new bridge is replacing the old Silver Bridge at reference post 49.5 – be named “The Veterans Bridge” (see attached letter dated February 1, 2006). Their request is made on behalf of veterans organizations throughout the Bitterroot Valley and is intended to honor new veterans returning from Iraq as well as veterans that have served in the past.

MDT does not designate or rename bridges/routes. However, many sections of highways in Montana have been given special designation or names by Congress, federal agencies, the Montana legislature, and the Transportation Commission.

### **Summary**

In accordance with past practice, MDT may make and install the signs, then assume the responsibility and associated costs for long-term maintenance. Past practice of the commission has required the requesting entity to arrange to pay for manufacturing the signs.

### **Staff recommendations**

Staff does not have a recommendation for this agenda item. A map showing all specifically designated or named routes in the state is attached.

### **Notes/discussion**

### **Commission action**

Agenda item: 8

Staff person handling: Loran Frazier, Chief Engineer

Date/location: March 1, 2006 in Helena, MT

Item: **Scour repair to three Gallatin River bridges on I 90 east of Manhattan**

*Gallatin River Scour Mitigation* [BH-IM 0002(721); CN 5466001]

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### **Background**

Three bridges over the Gallatin River, about one mile southeast of Manhattan, are showing severe scour damage:

- Interstate 90 in the east and westbound lanes (reference post 292.425)
- Secondary S205 (reference post 14.518)

The original project (*D2 Scour Repair*) included seven bridge sites, has already been programmed, and was scheduled to be let to contract in 2009. These three bridges were split from the original project, to be constructed in 2007. However, given that the stream bed has eroded to expose or threaten to expose the bridge foundations, we would like to further accelerate the project and perform repairs to these three bridges before water levels rise this spring.

In accordance with FHWA guidelines, a plan of action has been developed for these bridges and they have been placed on emergency watch status. Until repairs are completed, MDT Hydraulics staff recommends possible traffic closure across these bridges during flow conditions exceeding the 25-year flood level, and immediate closure for conditions exceeding the 50-year flood level.

Snowpack in the watershed is currently at 113 percent of normal (per USDA data in Natural Resources Conservation Service report dated February 13, 2006). Based on this data, there is a high potential that a 25-year or 50-year flood event could occur. In addition, debris that could become lodged against the piers and a wet spring could further exacerbate scour occurrence.

There is an average annual daily traffic count of over 12,000 on Interstate 90 in this area. Having to detour that amount of traffic through Belgrade and Manhattan would not be a very safe or convenient to those motorists, not to mention the conflict with local traffic using the Belgrade and Manhattan interchanges.

Time is of the essence in completing the work before high water in order to eliminate the potential need to close the structures.

### *Public involvement*

A news release was provided to the media on April 4, 2005 and the information appeared in the "local briefs" of the Bozeman Chronicle on April 8, 2005. An additional release will be provided to the Bozeman area media the week of February 20, 2006.

### *Project details*

The proposed countermeasures are to install cabled-concrete-mattresses around all in-stream piers of the three structures. The work will include excavation around the in-stream piers, placement of the mattresses and earth anchors, and backfilling the excavation with stockpiled material. The design is intended to resist scour and protect the spread footings during a 500-year flood level.

### *Permits and coordination*

These scour mitigation measures have been reviewed by various resource agencies including Montana Fish Wildlife and Parks, Department of Environmental Quality, and the US Army Corps of Engineers. We are diligently working with our sister agencies to obtain the necessary permits.

We are coordinating with the railroad to ensure we don't affect their nearby bridge.

Construction permits will be required for access to the sites. Easements from the Montana Department of Natural Resources and Conservation will be necessary since this work is within a navigable section of the Gallatin River.

### **Summary**

There is an urgent need for the installation of scour mitigation measures to protect the traveling public, adjacent property owners, and structural integrity of these three bridges. Plans for the repairs are complete. Staff will aim to have the contract ready for commission action at their March 6, 2006 conference call.

### **Staff recommendations**

Staff recommends the commission approve an accelerated schedule for advertising and letting this repair project to contract.

### **Notes/discussion**

### **Commission action**

Agenda item: 9

Staff person handling: Loran Frazier, Chief Engineer

Date/location: March 1, 2006 in Helena, MT

Item: **Letting lists**

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**Background**

Staff will distribute the most current lists of upcoming projects slated for advertisement and bid letting.

**Staff recommendations**

Staff recommends approval of the letting lists.

**Notes/discussion**

**Commission action**

Agenda item: 10

Staff person handling: Loran Frazier, Chief Engineer

Date/location: March 1, 2006 in Helena, MT

Item: **Certificates of completion**

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### **Background**

Attached are certificates of completion for December 2005 and January 2006.

### **Summary**

<i>Month</i>	<i>Original contract amount (monthly total)</i>	<i>Final payment amount (monthly total)</i>
December 2005	\$22,567,195.00	\$23,593,282.00
January 2006	\$11,651,723.00	\$12,225,691.00
<b>TOTAL</b>	<b>\$34,218,918.00</b>	<b>\$35,818,973.00</b>

### **Staff recommendation**

Staff recommends approval.

### **Notes/discussion**

### **Commission action**

Agenda item: 11

Staff person handling: Loran Frazier, Chief Engineer

Date/location: March 1, 2006 in Helena, MT

Item: **Project change orders**

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### **Background**

Attached are change orders for December 2005.

### **Summary**

<i>Month</i>	<i>Total</i>
December 2005	\$1,218,022.38
	<b>\$1,218,022.38</b>

### **Staff recommendation**

Staff recommends approval.

### **Notes/discussion**

### **Commission action**

Agenda item: 12a

Staff person handling: Loran Frazier, Chief Engineer

Date/location: March 1, 2006 in Helena, MT

Item: **Liquidated damages**

*STPP 51-3(3)60* Sidney – West

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### **Background**

Wickens Construction, Inc of Lewistown, MT overran the contract time by 1 day. Wickens Construction signed the Contractors Final Inspection on December 14, 2005 agreeing to the amount of liquidated damages on this project. Our recommendation is noted below.

### **Summary**

Award Date:	Dec 29, 2003	Proceed Date:	Feb 2, 2004
Work Began:	Mar 29, 2004	Work Completed:	Dec 14, 2005
Contract Time:	180 working days	Work Extensions:	2 working days
Time Used:	183 working days	Overrun:	1 days
Contract Amount:	\$7,135,189		

### **Staff recommendations**

We recommend assessing 1 day at \$2,624 per day for a total of \$2,624.

### **Notes/discussion**

### **Commission action**

Agenda item: 12b

Staff person handling: Loran Frazier, Chief Engineer

Date/location: March 1, 2006 in Helena, MT

Item: **Liquidated damages**

**STPHS-BR 5809(4)** *N. Montana Ave – Turn Lane*

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### **Background**

Helena Sand & Gravel Inc of Helena, MT overran the contract time by 1 day. We wrote the contractor on December 9, 2005 of the overrun of contract time. They were informed they had 30 days in which to respond if they intended to request a waiver from the Commission. They were informed that if a written reply was not received within 30 days, the liquidated damages would stand. As there was no response from the contractor, our recommendation is noted below.

### **Summary**

Award Date:	Mar 10, 2003	Proceed Date:	Apr 7, 2003
Work Began:	Jun 5, 2003	Work Completed:	Nov 23, 2004
Contract Time:	110 working days	Work Extensions:	14 working days
Time Used:	115 working days	Overrun:	1 day
Contract Amount:	\$1,511,563		

### **Staff recommendations**

We recommend assessing 1 day at \$1,192 per day for a total of \$1,192.

### **Notes/discussion**

### **Commission action**

Agenda item: 12c

Staff person handling: Loran Frazier, Chief Engineer

Date/location: March 1, 2006 in Helena, MT

Item: **Liquidated damages**  
**MT 323-1(22)60** *Alzada – North (Phase II)*

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### **Background**

Prince Inc of Forsyth, MT overran the contract time by 7 days. We wrote the contractor on January 6, 2006 of the overrun of contract time. They were informed they had 30 days in which to respond if they intended to request a waiver from the Commission. They were informed that if a written reply was not received within 30 days, the liquidated damages would stand. As there was no response from the contractor, our recommendation is noted below.

### **Summary**

Award Date:	Oct 13, 2004	Proceed Date:	Nov 15, 2004
Work Began:	Feb 2, 2005	Work Completed:	Sep 16, 2005
Contract Time:	60 working days	Work Extensions:	0 working days
Time Used:	67 working days	Overrun:	7 days
Contract Amount:	\$2,877,140		

### **Staff recommendations**

We recommend assessing 7 days at \$1,781 per day for a total of \$12,467.

### **Notes/discussion**

### **Commission action**

Agenda item: 12d

Staff person handling: Loran Frazier, Chief Engineer

Date/location: March 1, 2006 in Helena, MT

Item: **Liquidated damages**

NH-CM 60-2(62)91 *10<sup>th</sup> Ave S – 26<sup>th</sup> to 38<sup>th</sup> – Great Falls*

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### **Background**

United Materials of Great Falls, Inc of Great Falls, MT overran the contract time by 7 days. We wrote the contractor on December 9, 2005 of the overrun of contract time. They were informed they had 30 days in which to respond if they intended to request a waiver from the Commission. They were informed that if a written reply was not received within 30 days, the liquidated damages would stand. As there was no response from the contractor, our recommendation is noted below.

### **Summary**

Award Date:	Jul 6, 2004	Proceed Date:	Aug 9, 2004
Work Began:	Aug 9, 2004	Work Completed:	Nov 3, 2005
Contract Time:	60 working days	Work Extensions:	1 working days
Time Used:	68 working days	Overrun:	7 days
Contract Amount:	\$1,937,326		

### **Staff recommendations**

We recommend assessing 7 days at \$1,192 per day for a total of \$8,344.

### **Notes/discussion**

### **Commission action**

Agenda item: 12e

Staff person handling: Loran Frazier, Chief Engineer

Date/location: March 1, 2006 in Helena, MT

Item: **Liquidated damages**

CM 5215(1) *13<sup>th</sup> St S – 10<sup>th</sup> to 21<sup>st</sup> St – Great Falls*

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### **Background**

United Materials of Great Falls, Inc of Great Falls, MT overran the contract time by 5 days. We wrote the contractor on December 9, 2005 of the overrun of contract time. They were informed they had 30 days in which to respond if they intended to request a waiver from the Commission. They were informed that if a written reply was not received within 30 days, the liquidated damages would stand. As there was no response from the contractor, our recommendation is noted below.

### **Summary**

Award Date:	May 10, 2004	Proceed Date:	Jun 7, 2004
Work Began:	Jun 11, 2004	Work Completed:	Dec 2, 2005
Contract Time:	100 working days	Work Extensions:	0 working days
Time Used:	105 working days	Overrun:	5 days
Contract Amount:	\$1,398,321		

### **Staff recommendations**

We recommend assessing 5 days at \$1,192 per day for a total of \$5,960.

### **Notes/discussion**

### **Commission action**

Agenda item: 12f

Staff person handling: Loran Frazier, Chief Engineer

Date/location: March 1, 2006 in Helena, MT

Item: **Liquidated damages**

STPS 219-1(2)0 *Pendroy – Ec&W*

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### **Background**

Schellinger Construction Co, Inc of Columbia Falls, MT overran the contract time by 3 days. We wrote the contractor on December 9, 2005 of the overrun of contract time. They were informed they had 30 days in which to respond if they intended to request a waiver from the Commission. They were informed that if a written reply was not received within 30 days, the liquidated damages would stand. As there was no response from the contractor, our recommendation is noted below.

### **Summary**

Award Date:	Mar 7, 2005	Proceed Date:	Apr 4, 2005
Work Began:	Apr 14, 2005	Work Completed:	Sep 21, 2005
Contract Time:	45 working days	Work Extensions:	0 working days
Time Used:	48 working days	Overrun:	3 days
Contract Amount:	\$1,322,664		

### **Staff recommendations**

We recommend assessing 3 days at \$1,505 per day for a total of \$4,515.

### **Notes/discussion**

### **Commission action**

Agenda item: 12g

Staff person handling: Loran Frazier, Chief Engineer

Date/location: March 1, 2006 in Helena, MT

Item: **Liquidated damages**

CM 6714(5) *Center St – Kalispell*

CM 6715(2) *2<sup>nd</sup> – Meridian to 3<sup>rd</sup> Ave E - Kalispell*

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### **Background**

Schellinger Construction Co, Inc of Columbia Falls, MT overran the contract time by 5 days. We wrote the contractor on December 9, 2005 of the overrun of contract time. They were informed they had 30 days in which to respond if they intended to request a waiver from the Commission. They were informed that if a written reply was not received within 30 days, the liquidated damages would stand. As there was no response from the contractor, our recommendation is noted below.

### **Summary**

Award Date:	Jul 6, 2004	Proceed Date:	Aug 9, 2004
Work Began:	Aug 12, 2004	Work Completed:	Sep 16, 2005
Contract Time:	20 working days	Work Extensions:	3 working days
Time Used:	28 working days	Overrun:	5 days
Contract Amount:	\$343,141		

### **Staff recommendations**

We recommend assessing 5 days at \$673 per day for a total of \$3,365.

### **Notes/discussion**

### **Commission action**

Agenda item: 12h

Staff person handling: Loran Frazier, Chief Engineer

Date/location: March 1, 2006 in Helena, MT

Item: **Liquidated damages**

SFCS 352-1(6)0 *Dayton – Lake Mary Ronan*

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### **Background**

Schellinger Construction Co, Inc of Columbia Falls, MT overran the contract time by 2 days. We wrote the contractor on October 14, 2005 of the overrun of contract time. They were informed they had 30 days in which to respond if they intended to request a waiver from the Commission. They were informed that if a written reply was not received within 30 days, the liquidated damages would stand. As there was no response from the contractor, our recommendation is noted below.

### **Summary**

Award Date:	Feb 7, 2005	Proceed Date:	Mar 14, 2005
Work Began:	Feb 7, 2005	Work Completed:	Aug 29, 2005
Contract Time:	40 working days	Work Extensions:	0 working days
Time Used:	42 working days	Overrun:	2 days
Contract Amount:	\$808,243		

### **Staff recommendations**

We recommend assessing 2 days at \$1,171 per day for a total of \$2,342.

### **Notes/discussion**

### **Commission action**

Agenda item: 12i

Staff person handling: Loran Frazier, Chief Engineer

Date/location: March 1, 2006 in Helena, MT

Item: **Liquidated damages**

*NH 22-3(8)81 Culbertson – North and NH 22-3(9)88 Culvert – N of Culbertson*

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### **Background**

Riverside Contracting Inc of Missoula, MT overran the contract time by 19 days. We wrote the contractor on January 6, 2006 of the overrun of contract time. They were informed they had 30 days in which to respond if they intended to request a waiver from the Commission. They were informed that if a written reply was not received within 30 days, the liquidated damages would stand. As there was no response from the contractor, our recommendation is noted below.

### **Summary**

Award Date:	Jul 6, 2004	Proceed Date:	Aug 9, 2004
Work Began:	Aug 4, 2004	Work Completed:	Aug 24, 2005
Contract Time:	90 working days	Work Extensions:	0 working days
Time Used:	109 working days	Overrun:	19 days
Contract Amount:	\$1,511,991		

### **Staff recommendations**

We recommend assessing 19 days at \$1,192 per day for a total of \$22,648.

### **Notes/discussion**

### **Commission action**

Agenda item: 13

Staff person handling: Jim Lynch, Director

Date/location: March 1, 2006 in Helena, MT

Item: **Set conference call time to make expedited award of the two Highway 93 bond projects slated for March 30th bid letting**

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## **Background**

At the January 25, 2006 commission meeting, Chief Engineer Loran Frazier requested that the commission consider some form of expedited award for two Highway 93 contracts in the March 30th bid letting.

Conference calls are already scheduled as follows:

- March 6, 2006 – 10 am
- April 10, 2006 – 10 am

## **Staff recommendations**

Staff recommends the commission schedule an additional teleconference on Monday, **April 3 at 10 am** to make the expedited award.

## **Notes/discussion**

## **Commission action**

Agenda item: 14

Staff persons handling: Jim Lynch, Director  
Sandra Straehl – Rail, Transit & Planning Administrator

Date/location: March 1, 2006 in Helena, MT

Item: **Educational component**

- Secondary roads – history, funding, etc.
  - Safe Routes to Schools – new category of funding under SAFETEA-Lu worth \$1 million
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**Background**

At the January 25, 2006 commission meeting, Chairman Kennedy requested more information on the secondary system, history, funding, etc. by way of a presentation at the next commission meeting.

At the 1/25/06 meeting, Chairman Kennedy also noted that he'd been receiving questions about the new funding for school safety dollars provided by SAFETEA-Lu (\$1 million per year total). Director Lynch said we could present information at the next commission meeting. Commissioner Howlett suggested we invite Linda McCulloch, superintendent of schools, or a staff designee, and ask her to get the information out.

**Notes/discussion**

Agenda item: 15

Staff person handling: Jim Lynch, Director

Date/location: March 1, 2006 in Helena, MT

Item: **Commission discussion**

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**Notes/discussion**

Agenda item: 16

Staff person handling: Jim Lynch, Director

Date/location: March 1, 2006 in Helena, MT

Item: **Public comment**

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**Notes/discussion**